



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/293,464	04/15/1999	ALWARKURICHI PADMANA NAGARAJ	RR2569	4894

7590 06/05/2002

JOHN D CRANE
NORTHERN TELECOM LIMITED
P O BOX 832130
MAIL STOP 468/05/B10
RICHARDSON, TX 75082

EXAMINER

NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
----------	--------------

2665

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/293,464

Applicant(s)

NAGARAJ, ALWARKURICHI
PADMANA

Examiner

Steven HD Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 19-22 is/are allowed.
- 6) ☒ Claim(s) 10-13, 17 and 18 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim 4 is depended by itself. The examiner assumes this claim is depended into claim 2.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurano (USP 5249178).

Regarding claim 10, Kurano discloses an apparatus comprising a plurality of plurality of packet processing units (Fig 1, Ref 28a and 28b) connected to a routing table (Fig 1, Ref 29a) and a plurality of buffer memories for storing the packets (Fig 2, each of Ref 36s has a buffer memory, FIFO, for storing the packets) and routing table processing unit (Fig 2, Ref 31a) connected to a routing table.

Regarding claim 11, Kurano discloses an apparatus comprising a plurality of packet processing units (Fig 1, Ref 28a and 28b) connected to a routing table (Fig 1, Ref 29a) and a

Art Unit: 2665

memory for storing the packets (Fig 2, Ref 23) and routing table-processing unit (Fig 2, Ref 31a) connected to a routing table.

Regarding claims 12-13, Kurano discloses a switch connecting to the plurality of packet processing units and routing processing unit (Fig 2, Ref 21 is a switch).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurano (USP 5249178) in view of Doshi (USP 6073248).

Regarding claim 17, Kurano does not disclose the claimed invention. In the same field of endeavor, Doshi discloses a buffer for storing the packet, which is received from a WDM network (Fig 7, Ref 70-1).

Since Kurano discloses a interface having a FIFO for storing the packet which is received from a SONET network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply an interface for receiving the packets from a WDM network and storing the packet into the buffer as disclosed by Doshi's system into Kurano's system. The motivation would have been to reduce the size of the node.

Regarding claim 18, Kurano does not disclose the claimed invention. However, the examiner takes "office notice" that a differentiated processing means "scheduler" for processing

Art Unit: 2665

the packet based on a placement of a packet in one of the plurality of buffer is well known and expected in the art. The motivation would have been to reduce the latency of high priority packet.

Allowable Subject Matter

6. Claims 1-9 and 19-22 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter: the prior arts in the record fail to disclose or make obvious to a method for retrieving a packet from a memory by a packet processing unit for determining the type of received packet; forwarding the packet to a routing table processing unit if the packet type is determined to be a routing information packet; retrieving a routing information from a routing table if the packet is determined not to be a routing information packet wherein the routing table is stored in the second shared memory connected to plurality of packet processing unit and updating the packet with retrieved forwarding information to forward the updated packet within a structure of the claims.

8. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 14, the prior arts in the record fail to disclose or make obvious to a system comprising a packet processing unit for determining the type of received packet; forwarding the packet to a routing table processing unit if the packet type is determined to be a routing information packet; retrieving a routing information from a routing table if the packet is

Art Unit: 2665

determined not to be a routing information packet wherein the routing table is stored in the second shared memory connected to plurality of packet processing unit and updating the packet with retrieved forwarding information to forward the updated packet.

Regarding claim 16, the prior arts in the record fail to disclose or make obvious to a system comprising a routing table processing unit having a locking means, updating means and unlocking means.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

France (USP 5754790) discloses a method for updating routing table at a router comprising step of determining if a routing information protocol frame is included a new information or not; if containing a new routing information, the routing table will be updated; otherwise processing the frame using existing forwarding mechanisms.

Chang (USP 6111673) discloses a method and apparatus for routing the packet in the optical network.

Karol (USP 5416769) discloses a scheduler for processing a packet according to a placement of the packet in the buffer.

Yamamoto (USP 5848059) discloses a control device for routing a packet according to a placement of the packet in the buffer.

Manning (USP 5917805) discloses a switch for centralizing and partitioned memory for connection topology database.

Shikama (USP 5513172) discloses a frame relay apparatus.

Soloway (USP 5265092) discloses a method and apparatus for synchronizing the routing table.

Ayandeh (USP 6069895) discloses a distributed route server.

Sannino (USP 5784367) discloses an apparatus for routing a packet.

Dai (USP 5781549) discloses an apparatus for routing a packet.

Cotton (USP 5535197) discloses an apparatus for routing a packet.

Simpson (USP 5987008) discloses an ATM switch.

Ito (USP 5802316) discloses a method for updating routing table at a router comprising step of determining if a RIP packet is received, updating the routing table, otherwise do not update the table.

Fujioka (USP 4692917) discloses a method and apparatus for routing a packet based on the information on the routing table.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

